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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GANTT, ALAN T

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,786

Applicant(s)

CISAR, JAMES M.

Examiner

Alan T. Gantt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6,7,9-14,16,18,19 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,7,9-14,16,18,19 and 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 6/10/05 have been fully considered but they are not persuasive. Applicant has added limitations to his independent claims to overcome the Tom reference and added new claims 25-30. Applicant primarily argues that since the Tom reference includes a handset that is configured to receive removable cartridges, the cartridge has only one connector. As amended applicant's claims 1 and 13 includes the first section having one connector for electrically connecting to the host and a second connector for electrically connecting with the detachable second section. The Tom reference does not have the second connector. New references are introduced to meet applicant's added claim language.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 6, 7, 9-11, 13, 14, 16, 18, 19, and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Bridgelall.

Regarding claim 1, Bridgelall discloses a dual mode mobile unit that's arranged to communicate in either a first or second data communication standard such as combined

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Bluetooth and 802.11 operations. Bridgelall, thus, includes a communications module comprising:

a first section for processing data in accordance with at least a first communication standard (Figure 1 – ref.# 16 and 18 – col. 3, lines 51-65) , wherein processing data in accordance with at least a first communication standard includes at least one of modulating and demodulating the data wherein said first section includes a connecting member for electrically connecting said first section with an external HOST processor; (Figure 1, ref.# and 52 and 60 and col. 4, lines 52-59) and

a second section for transmitting and receiving data via an antenna in accordance with the first communication standard (Figure 1 – ref.# 12 – col. 3, lines 51-65), said second section detachable from the first section, wherein said second section is replaceable with a third section for transmitting and receiving data via an antenna in accordance with a second communication standard (col. 3, line 66 to col. 4, line 4); wherein the first section and second section are electrically connected via respective mating connecting members. (Figure 1, ref.# 34 – col. 3, line 66 to col. 4, line 4 – allows for either a single antenna or may be switched between modules)

Regarding claim 2, Bridgelall meets the limitation - A communications module according to claim 1, wherein said first communication standard uses a first frequency band (col. 3, lines 51-65 where RF module 12 represents the 802.11 standard which operates within the 5 Ghz frequency range).

Regarding claim 4, Bridgelall meets the limitation - A communications module according to claim 1, wherein said second communication standard uses a second frequency band (col. 3, line 51 to col. 4, line 4 where RF module 14 represents Bluetooth standard which operates within the 2400-2483.5 frequency range).

Regarding claim 6, Bridgelall meets the limitation - A communications module according to claim 1, wherein said first section includes a Medium Access Control (MAC) processing system and a physical layer (PHY) processing device. (col. 1, lines 7-13, col. 1, lines 51-61 , and col. 4, lines 50-67- Inherency - since 802.11 and Bluetooth are multiple sources that work together in one device)

Regarding claim 7, Bridgelall meets the limitation - A communications module according to claim 6, wherein said first section includes at least one memory device (col. 4, lines 63-65 - FIFO memory).

Regarding claim 9, Bridgelall meets the limitation - A communications module according to claim 1, wherein said second section includes a first circuit for converting signals between radio frequencies and intermediate frequencies (Figure 1, ref.# 24 – Inherent function of receivers).

Regarding claim 10, Bridgelall meets the limitation - A communications module according to claim 9, wherein said second section includes a second circuit for converting a

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signal between intermediate frequencies and baseband frequencies. (Figure 1, ref.# 24 – Inherent function of receivers).

11. A communications module according to claim 1. wherein said second section includes a first circuit for converting signals between radio frequencies and baseband frequencies (Figure 1, ref.# 24 – Inherent function of receivers).

Regarding claim 13, Bridgelall discloses a dual mode mobile unit that's arranged to communicate in either a first or second data communication standard such as combined Bluetooth and 802.11 operations. Bridgelall, thus, includes a communications module comprising:

a first section including means for processing data in accordance with at least a first communication standard (Figure 1 – ref.# 16 and 18 – col. 3, lines 51-65) wherein processing data in accordance with at least a first communication standard includes at least one of modulating and demodulating the data wherein said first section includes a connecting member for electrically connecting said first section with an external HOST processor; (Figure 1, ref.# 52 and 60 and col. 4, lines 52-59) and

a second section including means for transmitting and receiving data via an antenna in accordance with the first communication standard (Figure 1 – ref.# 12 – col. 3, lines 51-65), said second section detachable from the first section, wherein said second section is replaceable with a third section including means for transmitting and receiving

data via an antenna in accordance with a second communication standard; (col. 3, line 66 to col. 4, line 4)

wherein said first section and said second section are electrically connected via respective means for connecting. (Figure 1, ref.# 34 – col. 3, line 66 to col. 4, line 4 – allows for either a single antenna or may be switched between modules)

Regarding claim 14, Bridgelall meets the limitation - A communications module according to claim 13, wherein said first communication standard uses a first frequency band (col. 3, lines 51-65 where RF module 12 represents the 802.11 standard which operates within the 5 Ghz frequency range.

Regarding claim 16, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second communication standard uses a second frequency band (col. 3, line 51 to col. 4, line 4 where RF module 14 represents Bluetooth standard which operates within the 2400-2483.5 frequency range).

Regarding claim 18, Bridgelall meets the limitation - A communications module according to claim 13, wherein said first section includes a Medium Access Control (MAC) processing system and a physical layer (PHY) processing device. (col. 1, lines 7-13, col. 1, lines 51-61 , and col. 4, lines 50-67- Inherency - since 802.11 and Bluetooth are multiple sources that work together in one device)

Regarding claim 19, Bridgelall meets the limitation - A communications module according to claim 18, wherein said first section includes at least one means for storing data (col. 4, lines 63-65 -FIFO memory).

Regarding claim 21, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second section includes first conversion means for converting signals between radio frequencies and intermediate frequencies (Figure 1, ref.# 24 – Inherent function of receivers).

Regarding claim 22, Bridgelall meets the limitation - A communications module according to claim 21, wherein said second section includes a second conversion means for converting a signal between intermediate frequencies and baseband frequencies. (Figure 1, ref.# 24 – Inherent function of receivers).

Regarding claim 23, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second section includes conversion means for converting signals between radio frequencies and baseband frequencies. (Figure 1, ref.# 24 – Inherent function of receivers).

Regarding claim 24, Bridgelall meets the limitation - A communications module according to claim 13, wherein said second section includes means for amplifying a signal (Fig. 1, ref. 22 – it is an inherent function of the transmitter to amplify a signal).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall, in view of Koenck et al.

Regarding claim 25, Bridgelall discloses a dual mode mobile unit that is arranged to communicate in either a first or second data communication standard such as combined Bluetooth and 802.11 operations. Bridgelall, thus, includes a communications module, comprising:

a first connecting member for electrically coupling the first section with an external HOST processor, (col. 4, lines 50-59 and Fig. 1, ref.# 52)

a second connecting member, (Fig. 1, ref.# 34)

a physical layer processor coupled to the second connecting member, (Fig. 1, ref. 42 and col. 4, line 50 to col. 5, line 7- the configurable bit-stream processor is seen as the physical layer processor and it is coupled to the second connecting member at the WLAN interface through the baseband modem)

a media access control processor coupled to the physical layer processor and the

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first connecting member; (Fig. 1, ref.# 56 and col. 4, line 50 to col. 5, line 7- MAC processor is coupled to the Host processor through the host interface and configurable bit stream processor through the interface and FIFO device) and a second housing for housing an RF section of the communications module, the second housing detachable to the first housing comprises;

a connecting member for electrically coupling the second section to the second connecting member of the first section, (Figure 1, refs. 34 and 36 interfaces)

a circuit for converting between a baseband frequency and an RF frequency coupled to the connecting member, (Figure 1, ref.# 24 - Inherent function of receivers)

and

an antenna coupled to the circuit for converting between the baseband frequency and an RF frequency. (Figure 1, refs.# 24, 22, and 26)

Bridgelall is silent regarding a first and second housing for the individual sections.

Koenck discloses a handheld data capture system with interchangeable modules that includes a data collection terminal and a wireless communications module. A connector is arranged to removable couple the communication module with the data collection terminal.

Koenck teaches the following limitations:

a first housing for housing a digital section of the communications module, (paragraph 0085 and Figure 8, part 11)

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a second housing for housing an RF section of the communications module, the second housing detachable to the first housing comprises; (paragraph 0085 and Figure 8, part 118)

Bridgelall and Koenck are combinable because they share a common endeavor, namely, radio communication equipment. At the time of the applicant's invention it would have been obvious to modify Bridgelall to enclose the various section within housing as done by Koenck to allow for mating to equipment with varying characteristics.

Regarding claim 26, Bridgelall meets the limitation - A communications module according to claim 25, further comprising one of the group consisting of a non-volatile memory and a volatile memory coupled to the media access controller. (col. 4, line 50 to col. 5, line 7 – flash and FIFO)

Regarding claim 27, Bridgelall meets the limitation - A communication module according to claim 25, a circuit for converting a baseband signal to an RF signal comprising:

a circuit for converting the baseband signal to an intermediate frequency coupled to the connecting member; (Fig. 1, Ref. 22 and col. 3, lines 51- 65)

a circuit for converting the intermediate frequency to the RF frequency coupled to the circuit for converting the baseband signal to the intermediate frequency. (Fig. 1, Ref. 22 and col. 3, lines 51- 65)

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Regarding claims 12, 28, the examiner takes Official Notice that it is well known to utilize low noise amplifiers in transmitter circuits coupled between the circuit for converting the intermediate frequency to the RF frequency and that it would have been obvious to modify the Bridgelall / Koenck combination in order to put out a signal that is lower in noise content.

Regarding claim 29, the examiner takes Official Notice that it is well known to include A/D or D/A converters within physical layer processors and that it would have been obvious to modify the Bridgelall / Koenck combination to include such as a means for economizing the circuit topology.

Regarding claim 30, Bridgelall meets the limitation - A communications module according to claim 25, wherein the baseband frequency of the circuit for converting between a baseband frequency and an RF frequency is coupled to the connecting member for electrically coupling the second section to the second connecting member of the first sections and the RF frequency of the circuit for converting between a baseband frequency and an RF frequency is coupled to the antenna (Figure 1, refs 38, 34 and 12 and col. 3, lines 51-65).

Conclusion

Any inquiry concerning this communication from the examiner should be addressed to Alan Gantt at telephone number (571) 272-7878. The examiner can normally be reached between 9:30 AM and 6 PM within the Eastern Time Zone. The group FAX number is (571) 273-8300.

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Any inquiry of a general nature or relating to this application should be directed to
Supervisory Patent Examiner Nay Maung at telephone number (571) 272-7882.

Alan T. Gantt

Alan T. Gantt

August 16, 2005

Nick Corsaro
NICK CORSARO
PRIMARY EXAMINER